

### REMARKS

This application has been reviewed in light of the Office Action dated September 9, 2002. Claims 1-20 and 31-44 are presented for examination. Claims 21-30 and 45-54 have been canceled, without prejudice or disclaimer of subject matter. Claims 1-20 and 31-44 have been amended to define more clearly what Applicant regards as his invention. Claims 1, 6, 7, 12, 17, 18, 31, 33, 35, 38, 40, and 42 are in independent form. Favorable reconsideration is requested.

The specification has been carefully reviewed and amended as to matters of form. No new matter has been added. A Letter Transmitting Corrected Formal Drawings is submitted herewith, in response to the objections to the drawings set out in the form PTO-948 attached to the Office Action.

The Office Action objected to the drawings based on the Draftsperson's objections, as set forth on form PTO-948.

Applicant has carefully reviewed and amended the drawings to overcome the noted objection. It is believed that the objection to drawings have been obviated, and their withdrawal is therefore respectfully requested.

The Office Action objected to Claims 4, 5, 10, 11, 15, 16, 21-30, 37, and 44-54 under 37 C.F.R. § 1.75(c) as being in improper form because of multiple dependent claims.

First, cancellation of Claims 21-30 and 45 to 54 renders their objection moot. Applicant has carefully reviewed and amended the remaining noted claims by deleting the multiple dependencies. Accordingly, Applicant submits that the objection has been obviated, and its withdrawal is therefore respectfully requested.

Claims 1-54<sup>1</sup> were rejected under 35 U.S.C. § 102(e) as being anticipated by WO 97/36453 (*Hodgkinson*).

Claims 21-25 and 31-54 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Hodgkinson*, in view of U.S. Patent No. 6,148,000 (*Feldman et al.*).

Cancellation of Claims 21-30 and 45-54 renders their rejections moot.

As shown above, Applicant has amended independent Claims 1, 6, 7, 12, 17, 18, 31, 33, 35, 38, 40, and 42 in terms that more clearly define the present invention. Applicant submits that these amended independent claims, together with the remaining claims dependent thereon, are patentably distinct from the cited prior art for at least the following reasons.

#### Rejection of Claims 1-54 under 35 U.S.C. § 102(e)

The aspect of the present invention set forth in Claim 1 is a transmission method of transmitting on a network having at least one switch enabling information to be transmitted on at least one path between a source node and a destination node during a communication session. The network is adapted to transmit data in a connected mode and a non-connected mode. The session includes transmission of at least one packet, where each packet includes user data and additional data defining notably the path on the network which the

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<sup>1</sup> Applicant presumes the Office Action should read that Claims 1-20 and 26-30 are rejected under 35 U.S.C. § 102(e), because the Office Action fails to describe how *Hodgkinson* anticipates Claims 21-25 and 31-54, and further because the Office Action correctly states that *Hodgkinson* fails to "disclose an operation of acknowledging . . .". Applicant, for completeness of response, however has addressed all claims with respect to the 35 U.S.C. § 102(e) rejection.

user data will follow. When each packet is received, the destination node reads the additional data, and determines the transmission mode, connected or non-connected, taking into account at least some of the additional data. The additional data includes a data item representing a virtual channel and a data item representing the source node. During the determination step, the destination node takes into account the data items representing both the virtual channel and the source node in order to determine the transmission mode, connected or non-connected.

One important feature of Claim 1 is determining the transmission mode, connected or non-connected, by taking into account some of the additional data which includes both a data item representing a virtual channel and a data item representing a source node. That is, the present invention, as recited in Claim 1, does not need any specific information to be added to indicate the transmission mode.

*Hodgkinson*, as understood by Applicant, relates to a method of transmitting an asynchronous transfer mode (ATM) cell over an ATM network between an ATM input interface and an ATM output interface. Apparently, *Hodgkinson* discloses a method of transmitting data over an ATM network comprising a set of interconnected switches and which is suitable for transmitting data either in a connectionless manner or in a connection-oriented manner.

*Hodgkinson* specifies that in order to transmit data in a connection-oriented manner, a conventional processing, specific to ATM networks, is applied. To this end, the header fields of the packets transmitted in a connection-oriented manner are of the type represented in Figure 3, where initial values are inserted in VPI (Virtual Path Identifier) and VCI (Virtual Channel Identifier) fields (see page 5, lines 9-12 of *Hodgkinson*).

It is further explained in *Hodgkinson*, that in order to transmit data in a connectionless manner, specific data are added. The header fields which are used when a connectionless transmission mode is required are shown in Figure 9. As described on page 10, lines 18-20 of *Hodgkinson*, a predetermined value, which is for example "111", is used in the payload type (PT) field of the header to indicate that the service (mode of transmission) is connectionless. Further, it is described how each switch over the network deals with the packet headers it receives in order to determine the transmission mode used the packet under consideration. More particularly, the switch reads the PT field in order to determine whether a connectionless service is required (see page 11, lines 6 and following). If connectionless service is not required, then the switch reads the VPI and/or VCI fields (see page 11, lines 9-16).

As noted above, when data are transmitted in a connectionless manner, the headers which are used are those illustrated in Figure 9, and whose significance is that shown in Table 2 on page 9. From these, it is clear the headers contain a source address identifying the source node, the destination address, and the PT field which includes the predetermined value "111" to indicate connectionless oriented transmission mode. Accordingly, in the *Hodgkinson* system, specific information is added in a packet indicating the transmission mode which is to be used for the packet. Consequently, nothing has been found in *Hodgkinson* that teaches or suggests determining the transmission mode, connected or non-connected, taking into account some of the additional data which includes both a data item representing a virtual channel and a data item representing a source node, as recited in Claim 1. That is, no specific information needs to be added to indicate the transmission mode. This is explained, at least at, page 20, lines 4-

14 of the specification of the present invention, where the destination node reads at least some of the additional information and processes the virtual channel number information 309 and the source node identifier 310 in order to determine whether or not this information is contained in a descriptor of a connection currently valid on the virtual channel. In the negative, this means that the packet was transmitted in non-connected mode.

Further, *Hodgkinson* describes the processing which is performed in the intermediate switches over the network (see the description of Figure 7 on page 11). However, this processing in which the intermediate switch reads the PT fields to determine whether a connectionless service is required, is not disclosed with respect to the destination node, as is recited in Claim 1, discussed above.

For at least these reasons, Applicant submits that independent Claim 1 is not anticipated by *Hodgkinson*, and respectfully request withdrawal of the rejection under 35 U.S.C. § 102(e).

Independent Claim 12 is a system claim corresponding to method Claim 1, and is believed to be patentable for at least the same reasons as discussed above in connection with Claim 1. Additionally, independent Claims 7 and 18 include the similar feature of determining the transmission mode, connected or non-connected, taking into account some of the additional data which includes both a data item representing a virtual channel and a data item representing a source node, as discussed above in connection with Claim 1. Accordingly, Claims 7 and 18 are also believed to be patentable for reasons similar as those discussed above in connection with Claim 1.

The aspect of the present invention set forth in Claim 6 is a method of sending by a source node, on a network having at least one switch, enabling information to be transmitted on at least one path between the source node and a destination node during a communication session. The network being adapted to transmit data in at least one connected mode and at least one non-connected mode. The communication session includes transmission of at least one packet, where each packet includes user data and additional data defining notably the path on the network which the user data will follow. At each sending of information in the connected mode, the source node reserves a virtual channel, between the source node and the destination node, which the information will follow. Also, at each sending of a packet of information, in the connected mode, the source node determines the additional data, which represents a unique identifier of the source node in the network, and the virtual channel.

One important of aspect of Claim 6 is that it deals with transmission in the connected mode where the source node determines the additional data, which represents a unique identifier of the source node in the network, and the virtual channel.

As discussed previously, in *Hodgkinson* the header fields of the packets transmitted in a connection-oriented manner are of the type represented in Figure 3, and the significance of those fields is indicated in Table 1 on page 6, where the headers contain data indicating the virtual path identifier, the virtual channel identifier, and the payload type. Accordingly, the data included in the headers is, among other things, the virtual channel identifier, but not a unique identifier of the source node in the network, as recited in Claim 6 of the present invention. Consequently, nothing has been found in *Hodgkinson* that teaches or suggests transmission in the connected mode where the source node

determines the additional data, which represents a unique identifier of the source node in the network, and the virtual channel, as recited in Claim 6 of the present invention.

For at least this reason, Applicant submits that independent Claim 6 is not anticipated by *Hodgkinson*, and respectfully request withdrawal of the rejection under 35 U.S.C. § 102(e).

Independent Claim 17 is a device claim corresponding to method Claim 6, and is believed to be patentable for at least the same reasons as discussed above in connection with Claim 6.

As noted in Footnote 1, Applicant presumes the rejection under 35 U.S.C. § 102(e) applies only to Claims 1-20 and 26-30. However, for completeness of response, Applicant has addressed, in the following, the rejection of Claims 31-44 under 35 U.S.C. § 102(e).

Regarding Claims 31-44, Applicant notes that the Office Action, on pages 6 and 7, states that "*Hodgkinson* does not disclose an operation of acknowledging by sending acknowledgment data indicating the correct reception of the said user data and of the said additional . . .". Accordingly, these claims are not anticipated by *Hodgkinson*. Applicant further addresses, individually, the rejection of independent Claims 31, 33, 35, 38, 40, and 42 under 35 U.S.C. § 102(e)

The aspect of the present invention as set forth in independent Claim 31 is a transmission method of transmitting user data on a switched network between a source node having a unique identifier on the network and a destination node. The transmission method includes, performed by the source node, determining additional outward data

defining notably, in its entirety, the path to be followed on the network by the user data, and sending, by the source node, at least one packet of user data and additional outward data which relate to it. During this first determination step, the source node defines additional outward data representing the unique identifier of the source node. The transmission method further includes, performed by the destination node, on reception of each packet, reading the identifier in the additional outward data, and checking for correct reception of the user data. In the event of correct reception a second determination step, of determining additional return data defining notably a path going from the destination node to the node identified by the identifier, and acknowledging by sending acknowledgment data indicating correct reception of the user data and of the additional return data is performed. During this second determination step, the source node defines additional outward data representing a virtual channel which the user data must follow. The unique identifier of the source node being placed in addition to the virtual channel, thereby enabling the destination node to identify the virtual channel used by the user data, without any ambiguity.

An important feature of Claim 31 is that additional outward data representing a unique identifier of the source node in the network in addition to the virtual channel which the user data transmitted by the source node must follow are determined by the source node.

For reasons substantially similar to those discussed above in connection with independent Claims 1, 6, and 7, *Hodgkinson* does not anticipate independent Claim 31. Accordingly, Applicant respectfully requests the withdrawal of the rejection of Claim 31 under 35 U.S.C. § 102(e).



Independent Claim 38 is a system claim corresponding to method Claim 31, and is believed to be patentable for at least the same reasons as discussed above in connection with Claim 31. Additionally, independent Claims 33 and 40 include the similar feature that additional outward data representing a unique identifier of the source node in the network in addition to the virtual channel which the user data transmitted by the source node must follow are determined by the source node, as discussed above in connection with Claim 31. Accordingly, Claims 33 and 40 are also believed to be patentable for reasons similar as those discussed above in connection with Claim 31.

For reasons similar to those discussed above in connection with independent Claims 1, 6, 7, and 31, independent method Claim 35, which recites that the destination node reads the unique source node identifier, in addition to a virtual channel which the user data transmitted by the source node must follow, is not anticipated by *Hodgkinson*, and Applicant respectfully requests withdrawal of the rejection of Claim 35 under 35 U.S.C. § 102(e).

Independent Claim 42 is a device claim corresponding to method Claim 35, and is also believed to be patentable for at least the same reasons as discussed above in connection with Claim 35.

Rejection Of Claims 21-25 and 31-54 under 35 U.S.C. § 103(a)

As noted previously, the aspect of the present invention as set forth in independent Claim 31 is a transmission method of transmitting user data on a switched network between a source node having a unique identifier on the network and a destination node. And that an important feature of Claim 31 is having in at least one packet transmitted

between a source node and a destination node, additional outward data representing a virtual channel which the user data must follow, and a unique identifier of the source node being placed in addition to the virtual channel. By virtue of this feature, as explained on page 5, lines 8-14 and page 9, lines 17-27 of the specification, the fact that the source node determines (or defines) information relating to a virtual channel which the user data must follow in addition to a unique source node identifier enables the destination node to identify the virtual channel used by the user data, without ambiguity. Accordingly, this makes the management of the network easier, because it does not require any centralized procedure. Also, this arrangement makes the implementation of the claimed method particularly simple and efficient.

The applied art, alone or in combination, is not seen to disclose or suggest the invention as defined by independent Claims 31, 33, 35, 38, 40, and 42, and in particular the feature having in at least one packet transmitted between a source node and a destination node, additional outward data representing a virtual channel which the user data must follow, and a unique identifier of the source node being placed in addition to the virtual channel.

As understood by Applicant, *Feldman et al.* concerns a switching apparatus and a method for receiving and transmitting data units which are each segmented into a series of cells of data. *Feldman et al.* uses standard IP routing protocols as the basis for switching IP datagrams, packets, frames, and other data units in switching environments, such as asynchronous transfer mode (ATM) environment for example, with the addition of a virtual circuit establishment protocol.

The Office Action alleges that *Feldman et al.* "discloses operation of acknowledging by sending acknowledgment data indicating the correct reception of the said user data and of the said additional return data characterised in that: during the additional outward data determination operation, the source node defines additional outward data representing a virtual channel which the said user data must follow, the unique identifier of the source node being placed in addition to said virtual channel, thereby enabling the destination node to identify the virtual channel used by the user data to avoid the packet loss at destination end', and cites Figures 5-7, Column 11, and Column 15 of *Feldman et al.* as support therefor. However, Applicant respectfully disagrees with this understanding of *Feldman et al.*, and submits that the cited portions of *Feldman et al.* do not disclose the feature having in at least one packet transmitted between a source node and a destination node, additional outward data representing a virtual channel which the user data must follow, and a unique identifier of the source node being placed in addition to the virtual channel.

For at least the above reason and the reasons discussed in regards to the rejection of Claim 31 under 35 U.S.C. § 102(e), even if *Hodgkinson* and *Feldman et al.* were to be combined in the manner proposed in the Office Action, assuming such combination would even be permissible, the resulting combination would fail to teach or suggest at least those features of Claim 31.

Accordingly, Applicant submits that Claim 31 is patentable over *Hodgkinson* and *Feldman et al.*, whether considered separately or in combination, and respectfully requests withdrawal of the rejection of Claim 31 under 35 U.S.C. § 103(a).

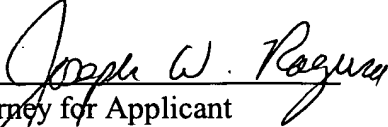
Independent Claims 33, 35, 38, 40, and 42 include a similar feature of having in at least one packet transmitted between a source node and a destination node, additional outward data representing a virtual channel which the user data must follow, and a unique identifier of the source node being placed in addition to the virtual channel, and are also believed patentable for reasons similar as those discussed above in connection with Claim 31.

The other rejected claims in this application depend from one or another of the independent claims discussed above, and, therefore, are submitted to be patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, individual consideration or reconsideration, as the case may be, of the patentability of each claim on its own merits is respectfully requested.

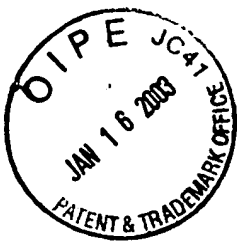
In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,

  
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VERSION WITH MARKINGS TO SHOW CHANGES MADE TO THE SPECIFICATION

The paragraph starting at page 2, line 27 and ending at page 3, line 4 has been amended as follows:

Thus the present invention relates to a method of transmitting on a network having at least one switch enabling information to be transmitted on at least one path between a [so-called] [“]source[”] node and a [so-called] [“]destination[”] node during a communication session, the said network being adapted to transmit data in at least one connected mode and at least one non-connected mode, the said session including the transmission of at least one packet, each packet including [on the one hand so-called] [“]user[”] data and [on the other hand] additional data defining notably the path on the said network which the said user data will follow,

The paragraph starting at page 3, line 15 and ending at page 3, line 23 has been amended as follows.

The present invention also relates to a method of sending by a [so-called] [“]source[”] node, on a network having at least one switch, enabling information to be transmitted on at least one path between the node and a [so-called] [“]destination[”] node during a communication session, the said network being adapted to transmit data in at least one connected mode and at least one non-connected mode, the said session including the transmission of at least one packet, each packet including [on the one hand so-called] [“]user[”] data and [on the other hand] additional data defining notably the path on the said network which the said user data will follow,

The paragraph staring at page 4, line 4 and ending at page 4, line 11 has been amended as follows.

The present invention further relates to a method of receiving by a [so-called] [“]destination[”] node, on a network having at least one switch, for receiving information on at least one path coming from a [so-called] [“]source[”] node, the said network being adapted to transmit data in at least one connected mode and at least one non-connected mode, the said session including the transmission of at least one packet, each packet including [on the one hand so-called] [“]user[”] data and [on the other hand] additional data defining notably the path on the said network which the said user data will follow,

The paragraph staring at page 5, line 26 and ending at page 5, line 29 has been amended as follows.

- the destination node has a memory in which additional [so-called] [“]reference[”] data are stored and the operation of determining the transmission mode includes an operation of comparing the said additional reference data and additional data read during the reading operation, and, preferentially,

The paragraph staring at page 7, line 21 and ending at page 7, line 23 has been amended as follows.

Thus the present invention relates to a method of transmitting user data on a switched network between a [so-called] [“]source[”] node having a unique identifier on the said network and a [so-called] [“]destination[”] node,

The paragraph starting at page 8, line 23 and ending at page 8, line 26 has been amended as follows.

The present invention also relates to a method of sending user data over a switched network used by a [so-called] [“]source[”] node having a unique identifier on the said network for transmitting user data to a [so-called] [“]destination[”] node,

The paragraph starting at page 9, line 7 and ending at page 9, line 9 has been amended as follows.

The present invention further relates to a method of receiving, by a [so-called] [“]destination[”] node, user data on a switched network, data coming from a [so-called] [“]source[”] node having a unique identifier on the said network,

The paragraph starting at page 9, line 23 and ending at page 9, line 25 has been amended as follows.

it more particularly includes an operation of reading said unique [“]source[”] node identifier, in addition to a virtual channel which the said user data must follow.

The paragraph starting at page 10, line 29 and ending at page 10, line 31 has been amended as follows.

The present invention relates to a device for transmitting user data on a switched network between a [so-called] [“]source[”] node having a unique identifier on the said network and a [so-called] [“]destination[”] node,



The paragraphs starting at page 11, line 26 and ending at page 11, line 31 has been amended as follows.

The present invention moreover relates to a device for sending user data on a switched network, from a [so-called] [“]source[”] node having a unique identifier on the said network, having:

- a means of determining additional outward data defining notably, in its entirety, the path to be followed on the said network by the said user data, in order to reach a [so-called] [“]destination[”] node, and

The paragraphs starting at page 12, line 8 and ending at page 12, line 21 has been amended as follows.

The present invention further relates to a device for receiving, by a [so-called] [“]destination[”] node, [(50)], for receiving user data on a switched network, data coming from a [so-called] [“]source[”] node [(10)] having a unique identifier on the said network

said device having:

- a means of reading [(504 to 506)] an identifier in additional outgoing data transmitted, in the said packet with user data, and
- processing means [(504 to 506)] adapted
  - to check the correct reception of the user data,
  - to determine additional return data defining notably a path going from the said destination node to the node identified by the said identifier,

- means [(103)] of sending on the one hand additional return data and on the other hand acknowledgement data indicating the correct reception of the said user data.

NY MAIN 318429

VERSION WITH MARKINGS TO SHOW CHANGES MADE TO CLAIMS

1. (Amended) [Method] A transmission method of transmitting on a network having at least one switch enabling information [(301)] to be transmitted on at least one path between a [so-called] [“]source[”] node [(100)] and a [so-called] [“]destination[”] node during a communication session, the [said] network being adapted to transmit data in at least one connected mode and at least one non-connected mode, the [said] session including [the] transmission of at least one packet, each packet including [on the one hand so-called] [“]user[”] data and [on the other hand] additional data [(308 to 311)] defining notably the path on the [said] network which the [said] user data will follow, said transmission method comprises:

when each packet is received, the destination node performs:

[ - an operation] a first reading step, of reading the [said] additional data [(601)], and

[ - an operation] a determination step, of determining the transmission mode [(602)], connected or non-connected, taking into account at least some of the [said] additional data,

[characterised in that] wherein,

the [said] additional data [(308 to 311)] include] includes a data item representing a virtual channel [(309)] and a data item representing the source node [(310)] and, during the determination [operation] step, the destination node takes into account the [said] data items representing both the virtual channel and the source node in order to determine the transmission mode, connected or [not] non-connected.

2. (Amended) [Transmission] A transmission method according to Claim 1, [characterised in that] wherein the destination node has a memory [(504)] in which additional [so-called] [“]reference[”] data are stored and [the operation of determining the transmission mode] said determination step includes [an operation] a comparison step, of comparing the [said] additional reference data and additional data read during the first reading [operation] step.

3. (Amended) [Transmission] A transmission method according to Claim 2, [characterised in that] wherein, during [the transmission mode determination operation] said determination step, the transmission mode is determined as connected when [on the one hand] the [said] read additional data [read] and [on the other hand] the [said] additional reference data are identical.

4. (Amended) [Transmission] A transmission method according to [any one of] Claim[s] 1 [to 3], [characterised in that] wherein, when, during [the transmission mode determination operation] said determination step, it is determined that the transmission mode is non-connected, the method includes [an operation] a second reading step, of reading [(604)], in the first packet containing the [said] information, additional data [(304 to 307)] relating to the [said] information and intended to [organise] organize its transmission.

5. (Amended) [Transmission] A transmission method according to Claim 1, [characterised in that] wherein, when the transmission mode is connected, the method

includes [an operation] a reservation step, of reserving a virtual channel [(205)] between the source node and the destination node, [the] said reservation [operation] step being effected as a preliminary to [a] transmission of the said information.

6. (Amended) [Method] A method of sending by a [so-called] [“]source[”] node, on a network having at least one switch, enabling information [(301)] to be transmitted on at least one path between the source node [(100)] and a [so-called] [“]destination[”] node during a communication session, the [said] network being adapted to transmit data in at least one connected mode and at least one non-connected mode, the [said] session including [the] transmission of at least one packet, each packet including [on the one hand so-called] [“]user[”] data and [on the other hand] additional data defining notably the path on the [said] network which the [said] user data will follow, said method comprises:

[characterised in that:]

[-] at each sending of information in the connected mode, the source node performs [an operation] a reservation step, of reserving a virtual channel [(205)] between the [said] source node and the [said] destination node, a virtual channel which the [said] information will follow, and

[-] at each sending of a packet of [the said] information, in the connected mode, the source node performs [an operation] a determination step, of determining the [said] additional data, during which the [said] determined additional data [determined represent] represents[:]

[• on the one hand] a unique identifier of the source node in the [said] network, and

[• on the other hand,] the [said] virtual channel.

7. (Amended) [Method] A reception method of receiving by a [so-called] [“]destination[”] node, on a network having at least one switch, for receiving information on at least one path coming from a [so-called] [“]source[”] node during a communication session, the [said] network being adapted to transmit data in at least one connected mode and at least one non-connected mode, the [said] session including the transmission of at least one packet, each packet including [on the one hand so-called] [“]user[”] data and [on the other hand] additional data defining notably the path on the [said] network which the [said] user data will follow, said reception method comprises:

when each packet is received, it includes:

[ - an operation] a first reading step, of reading the [said] additional data,

[ - an operation] a determination step, of determining the transmission mode, connected or non-connected, taking into account at least some of the [said] additional data,

[characterised in that] wherein,

the [said] additional data [include] includes a data item representing a virtual channel and a data item representing the source node and, during [the] said determination [operation] step, the destination node takes into account the [said] data items representing both

the virtual channel and the source node in order to determine the transmission mode, connected or [not] non-connected.

8. (Amended) [Reception] A reception method according to Claim 7, [characterised in that] wherein the destination node has a memory in which additional [so-called] [“]reference[”] data are stored and [in that the operation of determining the transmission mode] said determination step includes [an operation] a comparison step, of comparing the [said] additional reference data and additional data read during [the reading operation] said first reading step.

9. (Amended) [Reception] A reception method according to Claim [10] 8, [characterised in that] wherein, during [the transmission mode determination operation] said determination step, the transmission mode is determined as connected when the additional reference data the [said] read additional data are identical.

10. (Amended) [Reception] A reception method according to [any one of] Claim[s] 7 [to 9], [characterised in that] wherein, when, during [the transmission mode determination operation] said determination step, it is determined that the transmission mode is non-connected, the method includes [an operation] a second reading step, of reading, in the first packet containing the [said] information, additional data relating to the [said] information and intended to [organise] organize its transmission.

11. (Amended) [Reception] A reception method according to [any one of] Claim[s] 7 [to 10], [characterised in that] wherein, when the transmission mode is connected, the method includes [an operation] a reservation step, of reserving a virtual channel between the source node and the destination node, [the] said reservation [operation] step being effected as a preliminary to [a] transmission of the [said] information.

12. (Amended) [Device] A transmission system for transmitting on a network having at least one switch enabling information to be transmitted on of least one path between a [so-called] [“]source[”] node and a [so-called] [“]destination[”] node during a communication session, the [said] network being adapted to transmit data in at least one connected mode and at least one non-connected mode, the [said] session including the transmission of at least one packet, each packet including [on the one hand so-called] [“]user[”] data and [on the other hand] additional data defining notably the path on the [said] network which the [said] user data will follow, said transmission system comprises:

[the destination node having a] processing means of the destination node, adapted, each time a packet is received:

[-] to read the [said] additional data in the [said] packet, and

[-] to determine the transmission mode, connected or non-connected,

taking into account at least some of the [said] additional data,

[characterised in that:] wherein,

the source node has [a] determination means [of] for determining the additional data [adapted] so that the additional data [include] includes a data item representing a



virtual channel, a data item representing the source node and [the] said processing means of the destination node taking into account the [said] data items representing both the virtual channel and the source node in order to determine the transmission mode, connected or non-connected.

13. (Amended) [Transmission device] A transmission system according to Claim 12, [characterised in that] wherein the destination node has a memory means in which additional [so-called] [“]reference[”] data are stored and [in] that [the] said processing means of the [source] destination node is adapted to compare the [said] additional reference data and the read additional data [read in] of the [said] packet.

14. (Amended) [Transmission device] A transmission system according to Claim 13, [characterised in that] wherein [the] said processing means of the destination node is adapted to determine that the transmission mode is connected when [on the one hand] the [said] read additional data [read] and [on the other hand] the [said] additional reference data are identical.

15. (Amended) [Transmission device] A transmission system according to [any one of] Claim[s] 13 [to 14], [characterised in that] wherein, when [the] said processing means of the destination node has determined that the transmission mode is non-connected, to read, in the first packet containing the [said] information, additional data relating to the [said] information and intended to [organise] organize its transmission.

16. (Amended) [Transmission device] A transmission system according to [any one of] Claim[s] 13 [to 15], [characterised in that] wherein [the] said processing means of the destination node is adapted to reserve a virtual channel, in cooperation with the source node, and to effect the [said] reservation in order to effect the reception of information in the connected mode.

17. (Amended) [Device] A device for sending from a [so-called] [“]source[”] node, on a network having at least one switch, enabling information to be transmitted on at least one path between the source node [(100)] and a [so-called] [“]destination[”] [mode] node during a communication session, the [said] network being adapted to transmit data in at least one connected mode and at least one non-connected mode, the [said] session including the transmission of at least one packet, each packet including [on the one hand so-called] [“]user[”] data and [on the other hand] additional data defining notably the path on the [said] network which the [said] user data will follow,

[characterised in that it has] said device comprising:

[- a] reservation means adapted, on each sending of information in the connected mode, to effect a reservation of a virtual channel between the [said] source node and the [said] destination node, a virtual channel which the [said] information will follow[,]; and

[- a] determination means [of] for determining additional data, adapted, each time a packet of the [said] information is sent, in the connected mode, to perform an operation of determining [said] the additional data representing[:]

[• on the one hand] a unique identifier of the source node in the [said] network, and

[• on the other hand,] the [said] virtual channel.

18. (Amended) [Reception] A reception device of a [so-called] [“]destination[”] node, on a network having at least one switch, for receiving information on at least one path coming from a [so-called] [“]source[”] node during a communication session, the [said] network being adapted to transmit data in at least one connected mode and at least one non-connected mode, the [said] session including the transmission of at least one packet, each packet including [on the one hand so-called] [“]user[”] data and [on the other hand] additional data defining notably the path on the [said] network which the [said] user data will follow, said reception device comprises:

[said reception device having a] processing means adapted, each time a packet is received:

[-] to read the [said] additional data, and

[-] to determine the transmission mode, connected or non-connected, taking into account at least some of the [said] additional data,

[characterised in that] wherein[:],

the [said] additional data [include] includes a data item representing a virtual channel, a data item representing the source node and [the] said processing means [of the destination node] is adapted to take into account the [said] data items representing both the

virtual channel and the source node in order to determine the transmission mode, connected or [not] non-connected.

19. (Amended) [Reception] A reception device according to [any one of] Claim 18, [characterised in that] wherein it has a memory means in which additional [so-called] [“]reference[”] data are stored and [in that the operation of determining the transmission mode includes an operation of] said processing means includes comparison means for comparing the [said] additional reference data and the additional data read by [the reading] said processing means.

20. (Amended) [Reception] A reception device according to Claim 19, [characterised in that] wherein [the] said processing means is adapted to determine that the transmission mode is connected when the [said] additional reference data [of] and the read additional data are identical.

Claims 21 to 30 cancelled.

31. (Amended) [Method] A transmission method of transmitting user data on a switched network between a [so-called] [“]source[”] node [(10)] having a unique identifier on the [said] network and a [so-called] [“]destination[”] node [(50)],

[a] the transmission method [including,] comprises:

performed by the source node,[:]

[ - an operation] a first determination step, of determining additional outward data [(201 to 203)] defining notably, in its entirety, the path to be followed on the [said] network by the [said] user data, and

[ - an operation] a sending step, of sending [(205)], by the source node, at least one packet of [said] user data and [the said] additional outward data which relate to it,

wherein,

[ -] during [the additional outward data determination operation] said first determination step, the source node [defining] defines additional outward data representing the [said] unique identifier of the source node[,]; and

[ - the transmission method including,] performed by the destination node, on reception of each packet[:],

[ • an operation] a reading step, of reading [(602, 604)] the [said] identifier in the [said] additional outward data[,]; and

[ • an operation] a checking step, of checking [(604) the] correct reception of the user data and, in the event of correct reception:

[ • an operation] a second determination step, of determining additional return data [(609, 610)] defining notably a path going from the [said] destination node to the node identified by the [said] identifier, and

[ •] an [operation] acknowledgment step, of acknowledging [(611)] by sending [acknowledgement] acknowledgment data indicating [the] correct reception of the [said] user data and of the [said] additional return data,

[characterised in that:] wherein,

during [the additional outward data determination operation (201 to 203)] said first determination step, the source node defines additional outward data representing a virtual channel which the [said] user data must follow, the unique identifier of the source node being placed in addition to [said] the virtual channel, thereby enabling the destination node to identify the virtual channel used by the user data, without any ambiguity.

32. (Amended) [Transmission] A transmission method according to Claim 31, [characterised in that] wherein, during [the additional return data determination operation (609, 610)] said second determination step, the destination node determines additional return data representing the virtual channel which the [acknowledgement] acknowledgment data must follow.

33. (Amended) [Method] A method of sending user data over a switched network used by a [so-called] [“]source[”] node [(10)] having a unique identifier on the [said] network for transmitting user data to a [so-called] [“]destination[”] node [(50)],

[a] the method [including] comprises:

[- an operation] a determination step, of determining additional outward data [(201 to 203)] defining notably, in its entirety, the path to be followed on the [said] network by the [said] user data, and

[- an operation] a sending step, of sending [(205)], by the source node, at least one packet of [said] user data and [the said] additional outward data which relate to it,

[characterised in that] wherein, the additional outward data determined during [the additional outward data determination operation (201 to 203)] said determination step [represent] represents the [said] unique identifier of the source node in addition to the virtual channel which the [said] user data must follow.

34. (Amended) [Method] A method according to Claim 33, [characterised in that it includes,] on reception of a packet in return, coming from [a said] the destination node, [a] the packet including [acknowledgement] acknowledgment information[:], further comprises:

[• an operation] a read step, of reading [(207)] a virtual channel identifier represented by the [said acknowledgement] acknowledgment information[,], and

[• an operation] a comparison step, of comparing [(207)] the [said] received identifier [received] and the virtual channel identifier used during [the] said sending [operation] step.

35. (Amended) [Method] A reception method of receiving, by a [so-called] [“]destination[”] node [(50)], user data on a switched network, data coming from a [so-called] [“]source[”] node [(10)] having a unique identifier on the [said] network,

[said] the method [including] comprises:

on reception of each packet coming from the source node, [and performed by the destination node:]

[• an operation] a first read step, of reading [(604)] an identifier in additional outward data transmitted, in the [said] packet, with user data, and

[• an operation] a check step, of checking [the] correct reception of the user data and, in the event of correct reception:

[• an operation] a determination step, of determining additional return data [(609, 610)] defining notably a path going from the [said] destination node to the node identified by the [said] identifier, and

[•] an [operation] acknowledgment step, of acknowledging by sending [acknowledgement] acknowledgment data indicating the correct reception of the [said] user data and of the [said] additional return data,

[characterised in that:] wherein,

[it] said method more particularly [includes an operation] comprises a second read step, of reading [said] the unique [“]source[”] node identifier, in addition to a virtual channel which the [said] user data must follow.

36. (Amended) [Reception] A reception method according to Claim 35, [characterised in that] wherein, during [the additional return data determination operation] said determination step [(609, 610)], the destination node determines additional return data representing the virtual channel which the [acknowledgement] acknowledgment data must follow.

37. (Amended) [Reception] A reception method according to [either one of] Claim[s] 35 [or 36], [characterised in that] wherein, during [the additional return data determination operation (609, 610)] said determination step, the destination node incorporates, in



the additional return data, a virtual channel identifier represented by additional data received from the source node.

38. (Amended) [Device] A transmission system for transmitting user data on a switched network between a [so-called] [“]source[”] node [(10)] having a unique identifier on the [said] network and a [so-called] [“]destination[”] node [(50)], the transmission system comprises:

the [said] source node having[:];

[ - a means of] determination means for determining [(104 to 106)] additional outward data defining notably, in its entirety, the path to be followed on the [said] network by the [said] user data[,]; and

[ - a means of] sending means for sending [(103)], by the source node, at least one packet of [said] user data and [the said] additional outward data which relate to it,

wherein,

[ - the additional outward data] said determination means of the source node being adapted to define additional outward data representing the [said] unique identifier of the source node[,]; and

[ -] the destination node having[:];

[ • a means of] reading means for reading [(504 to 506)] the [said] identifier in the [said] additional outward data of each packet[,]; and

[ •] processing means [(504 to 506)] adapted to[:]

[·] check [the] correct reception of the user data and, in  
the event of correct reception,

[·] determine additional return data defining notably a  
path going from the [said] destination node to the node identified by the [said] identifier[·]; and

[• a means of] acknowledgment means for sending  
[acknowledgement] acknowledgment data indicating the correct reception of the [said] user data  
and of the [said] additional return data[·],

[characterised in that:] wherein,

[the additional outward data] said determination means is adapted to  
define additional outward data representing a virtual channel which the [said] user data must  
follow, the unique identifier of the source node being placed in addition to [said] the virtual  
channel, thereby enabling the destination node to identify the virtual channel used by the user  
data without any ambiguity.

39. (Amended) [Transmission device] A system according to Claim 38,  
[characterised in that] wherein [the additional return data] said determination means is adapted to  
determine additional return data representing the virtual channel which the [acknowledgement]  
acknowledgment data must follow.

40. (Amended) [Device] A sending device for sending user data on a  
switched network, from a [so-called] [“]source[”] node [(10)] having a unique identifier on the  
[said] network, [having] the sending device comprises:

[ - a means of] determination means for determining [(104 to 106)]  
additional outward data defining notably, in its entirety, the path to be followed on the [said]  
network by the [said] user data, in order to reach a [so-called] [“]destination[”] node [(50),]; and

[ - a means of] sending means for sending [(103)] at least one packet of  
[said] user data and [of the said] additional outward data which relate to it,

[characterised in that:] wherein,

[the means of determining additional outward data] said determination  
means is adapted to define additional outward data representing the [said] unique identifier of the  
source node, in addition to a virtual channel [number] which the [said] user data must follow.

41. (Amended) [Sending] A sending device according to Claim 40,  
[characterised in that it has] further includes:

[• a means (103) of] reception means for receiving a packet coming  
from the destination node, [a] the packet including [acknowledgement] acknowledgment  
information[,];

[• a means (104 to 106) of] reading means for reading a virtual channel  
identifier represented by the [said] [acknowledgement] acknowledgment information[,]; and

[• a means (104 to 106) of] comparison means for comparing the [said]  
received identifier [received] and the virtual channel identifier used [during the sending  
operation] by said sending means.

42. (Amended) [Reception] A reception device of a [so-called] ["destination[""] node [(50)], for receiving user data on a switched network, data coming from a [so-called] ["source[""] node [(10)] having a unique identifier on the [said ]network,

said reception device [having] comprises:

[• a means of] first reading means for reading [(504 to 506)] an identifier in additional outgoing data transmitted, in [the said] a packet with user data[, and];

[•] processing means [(504 to 506)] adapted to  
[•] to] check [the] correct reception of the user data,  
[•] to] determine additional return data defining notably a path going from the [said] destination node to the node identified by the [said] identifier[,]; and

[•] sending means [(103) of] for sending [on the one hand] additional return data and [on the other hand acknowledgement] acknowledgment data indicating [the] correct reception of the [said] user data[.]

[characterised in that:] wherein,

[it] said reception device more particularly includes [a] second reading means [of] for reading [said] the unique source node identifier, in addition to a virtual channel which [said] the user data must follow.

43. (Amended) [Reception] A reception device according to Claim 42, [characterised in that] wherein [the additional return data determination means (504 to 506)] said determination means is adapted to determine additional return data representing the virtual channel which the [acknowledgement] acknowledgment data must follow.

44. (Amended) [Reception] A reception device according to [either one of] Claim[s] 42 [or 43], [characterised in that] wherein [the additional return data determination means (504 to 506)] said determination means is adapted to incorporate, in the additional return data, a virtual channel identifier represented by additional data received from the source node.

Claims 45 to 54 cancelled.

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